

February 23, 2017



U.S. Department
of Transportation

East Building, PHH-30
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

**Pipeline and Hazardous
Materials Safety Administration**

DOT-SP 20352

EXPIRATION DATE: 2019-01-31

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Schlumberger Technology Corp
Rosharon, TX
2. PURPOSE AND LIMITATIONS:
 - a. This special permit authorizes the manufacture, mark, sale and use of non-DOT specification steel cylinders conforming with all the regulations applicable to a 3A DOT specification cylinder except as specified herein, for the transportation in commerce of the materials authorized by this special permit. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
 - b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce. The safety analyses did not consider the hazards and risks associated with consumer use, use as a component of a transport vehicle or other device, or other uses not associated with transportation in commerce.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.201(c), 173.202(c), 173.203(c), 173.301(f), in that the cylinder is not fitted with a pressure relief device. 173.302(a), 173.304(a), 173.304(d) in that a non-DOT specification cylinder is not authorized except as specified herein.

February 23, 2017

5. BASIS: This special permit is based on the application of Schlumberger Technology Corp dated September 28, 2016, submitted in accordance with § 107.105 and the public proceeding thereon.
6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Material Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Hydrocarbon gas mixture, compressed, n.o.s.	2.1	UN1964	N/A
Hydrocarbon gas mixture, liquefied, n.o.s.	2.1	UN1965	N/A
Hydrogen sulfide	2.3	UN1053	N/A
Liquefied gas, flammable, n.o.s.	2.1	UN3161	N/A
Compressed gas, toxic, flammable, n.o.s. <i>Inhalation hazard Zone B</i>	2.3	UN1953	N/A
Petroleum gases, liquefied or Liquefied petroleum gas	2.1	UN1075	N/A
Nitrogen, compressed	2.2	UN1066	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Prescribed packaging is a non-DOT specification cylinder conforming with Schlumberger Technology Corporation drawing number 101558955D dated May 9, 2016 on file with the Approvals and Permits Division (APD) and with the requirements for DOT Specification 3A cylinders (§178.35 and §178.36) except as follows:

§ 178.35(e) *Safety Devices*.

No pressure relief device is required on the completed cylinder.

February 23, 2017

§ 178.35(f) *Markings.*

Cylinders shall be marked to read "DOT-SP 20352" in lieu of "DOT-3A" followed by the service pressure.

§ 178.36(a) *Type, Size and Pressure.*

The cylinder bodies and components are machined from solid bar stock. The maximum service pressure shall not exceed 18,000 psig.

§ 178.36(b) *Steel.*

The authorized material of construction is Inconel 718, per Schlumberger Material Specification 100007444 on file with APD. The materials wetted with reservoir fluids must meet the requirements of the National Association of Corrosion Engineers (NACE) specification MR-0175 for suitability in hydrogen sulfide H₂S service.

§ 178.36(f) *Wall thickness.*

Minimum wall thickness must not be less than 0.246 inch.

§ 178.36(g) *Heat Treatment.*

* * *

Block components of Inconel 718 may undergo Salt Bath Nitriding per Schlumberger Coating Specification 101257837 and Dursan Inert Coating as per Schlumberger Coating Specification 101233101 on file with APD. The heat treatment of the purchased stock material must conform to the Schlumberger material specifications.

§ 178.36(h) *Openings in cylinders and connections.*

Openings and connections must conform as shown in the Schlumberger drawings on file with the APD.

§ 178.36(j) *Flattening test.*

No flattening test is required.

February 23, 2017

§ 178.36(l) *Acceptable results for physical flattening tests.*

The acceptable results for the required bar stock physical tests specified in §178.36 (k) is as follows:

For Inconel 718 bar stock:

Minimum Tensile Strength	175,000 psi
Minimum Yield Strength	125,000 psi
Minimum Elongation on 4D	20%

Minimum Reduction of Area:	
Test coupon cross section thk < 10in	35%
Test coupon cross section thk > 10in	25%
Maximum Rockwell C Hardness	40 HRC

Yield strength must be determined by the "offset" method as prescribed in ASTM Standard E8.

§ 178.36(m) *Leakage test.*

No leakage test is required.

§ 178.36(n) *Rejected cylinders.*

Rejected cylinders may not be re-heat treated.

c. OPERATIONAL CONTROLS - The proprietary sample cylinder (FNLT) assembly may be shipped either placed in its dedicated transit case or installed in the Reservoir Sampling Tool (FSCM).

8. SPECIAL PROVISIONS:

a. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this special permit for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this special permit.

b. A person who is not a holder of this special permit, but receives a packaging covered by this special permit, may reoffer it for transportation provided no modification or change is made to the packaging and it is offered for transportation in conformance with this special permit and the HMR.

February 23, 2017

- c. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.
- d. Each packaging manufactured under the authority of this special permit must be either (1) marked with the name of the manufacturer and location (city and state) of the facility at which it is manufactured or (2) marked with a registration symbol designated by the Office of Hazardous Materials Special Permits and Approvals for a specific manufacturing facility.
- e. A current copy of this special permit must be maintained at each facility where the packaging is manufactured under this special permit. It must be made available to a DOT representative upon request.
9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, and cargo vessel.
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel, aircraft, or motor vehicle used to transport packages covered by this special permit. The shipper must furnish a copy of this special permit to the air carrier before or at the time the shipment is tendered.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
- o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
 - o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
 - o Registration required by § 107.601 et seq., when applicable.

February 23, 2017

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when this special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)– "The Hazardous Materials Safety and Security Reauthorization Act of 2005" (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for William Schoonover
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

February 23, 2017

Copies of this special permit may be obtained by accessing the
Hazardous Materials Safety Homepage at

http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm

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PO: AS/TG